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REMARKS – General

By the above amendment, applicant has rewritten all the claims to define the invention more particularly and distinctly so as to overcome the technical
5 rejections and define the invention patentably over the prior art.

Claim Objections has been overcome

The last O.A. rejected the Claims 11-29. Claim 11-29 have been replaced with Claims 30-33. Applicant requests reconsideration of these rejections.

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Claim Rejections Under 35 USC § 103 have been overcome

15 The last O.A. rejected the Claims 11-18, 20 and 24 as being unpatentable "over Watanabe [US 5,907,478] in view of Larson [US 6,192,577]". Claims 11-18, 20 and 24 have been rewritten. Applicant requests reconsideration of these rejections, as now applicable to claims 30-33, for the following reasons:

20 1) Watanabe discloses a way of mounting part as "unit part" on to PCB as "
... relates to a structure for mounting a unit part, such as a transceiver RF unit, to be incorporated into an electronic device ..." (col 1. lines 6-8). The applicant's current invention is about an apparatus that enables a computer system board to have a plurality of expansion daughter cards, and solving the EMI issue among the expansion daughter cards and the
25 computer system board. A computer system expansion daughter card is completely different from a "unit part". E.g. different expansion daughter card with different functions can be plug in to the same computer main board expansion zone, comparing to one unit part is a part with integration of electronics including the mounting cover and has to be mount on to a

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specific location only. Therefore, the applicant respectfully suggests the last OA citing Watanabe as reference is improper.

- 5 2) Last OA suggested "to use the EMI shield housing design of Larson for the EMI shield housing of Watanabe, in order to be completely shield the daughter board in the computer system." Both Larson and Watanabe are not designed for computer add-on daughter cards. It is impossible to combine both designs, nor is there any suggestion of possible combine by Larson and Watanabe, the applicant respectfully suggests that the last OA agree to soldered on to PCB for shielding the daughter card inside for EMI purpose is in favor of the applicant's current invention.
- 10 3) The last OA also suggests "... to use a conducting material with copper in Watanabe, as suggested by Larson, for purpose of grounding the expansion daughter board". Larson's grounding design (Figs. 1,3,4, 5,6,7,) is completely different from the applicant's current invention (Fig. 1), therefore, even if the grounding is applied in Watanabe, the downward shielding and grounding will be different. Larson's disclosure does not provide enough grounding and shielding at daughter board level.
- 15 4) The last OA also points out "...it has been held that mere duplication of the essential working parts of a device involves only routine skill in the art ..." The applicant respectfully point out that the whole purpose of the applicant's current invention is to solve the problem of EMI and thermal issues when a computer board has multiple add-on expansion cards in a compact form factor. Therefore, multiple of the housing apparatuses in the applicant's current invention should be treated as elements of a bigger apparatus. In other words, the applicant is not trying to use "routine skill" to duplicate "essential working elements." Rather, the applicant's current invention solves the problem and enables a computer system board to have a plurality of expansion daughter cards without malfunctioning. The computer board with a plurality of daughter card expansion apparatuses
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should be one complete unit. By the same token, when the computer board of the applicant's current invention is stackable, the new apparatus formed by a plurality of stackable computer boards should be consider as one unit. Because, without solving the EMI and heating issues of the expansion daughter cards, the apparatus cannot function. In conclusion, the applicant suggests that multiple of same type of apparatuses in the applicant's current invention is not the "duplication" as pointed out by last OA. Accordingly, the regarding claim rejection is improper.

10 The last O.A. rejected the Claims 21-22, as being unpatentable "over Watanabe [US 5,907,478] in view of Larson [US 6,192,577] and Persson et al. [US 6,138,347]". Claims 21-22 have been rewritten. Applicant requests reconsideration of these rejections, as now applicable to claims 30-33, for the following reason:

15 1) According to Persson " ... the shielding strap 100 configured to be received in grounded vias in the circuit board and apertures in the shielding strap 100 adapted to receive grounded pins extending from the circuit board" (col. 4 lines 31-35). Persson uses shielding strap 100 as the grounding conductor from the PCB 240 to housing 300 rather than using it as a heat conductor. Even if the shielding strap 100 of Persson has function of heat conduction, the way of mounting shielding strap 100 in Persson is completely different from the heat conduction means (Fig.2, 213, 214) of the applicant's current invention where the purpose is to conduct the heat from the heat source directly (page 5, lines 7-8).

25 The last O.A. rejected the Claims 23, as being unpatentable "over Watanabe, as modified, as applied to claim 21 above, and further in view of Toy et al. [US 5,982,038]". Claims 23 have been rewritten. Applicant requests reconsideration of these rejections, as now applicable to claims 30-33, for the following reasons:

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- 1) As discussed before, the modifications suggested by last OA regarding to claim 21 were improper and cannot achieve the same result as the applicant's current invention. Therefore, even if a heatsink material is attached to the metallic housing structure, the new apparatus still cannot have the same result as the apparatuses of the applicant's current invention. Further, there is no indication and need for the combination of all of those patents.

The last O.A. rejected the Claims 26, as being unpatentable "over Watanabe [US 5,907,478] in view of Larson [US 6,192,577] and Lettang [US 6,362,974]". Claims 21-22 have been rewritten. Applicant requests reconsideration of these rejections, as now applicable to claims 30-33, for the following reasons:

- 1) As discussed before, there is no suggestion to combine both Watanabe and Larson, and it is impossible to combine them.
- 2) Even if we can combine both Watanabe and Larson, the new apparatus will still have less function than the applicant's current design.
- 3) Because of above reasons, even if a stackable computer board apparatus is made in view of Lettang, it will still lack of the capabilities of providing enough EMI protection for the expansion daughter boards and surrounding electronics.

Conclusion

- For all of the above reasons, the applicant submits that the claims are now in proper form, and that the claims all define patentably over the prior art. Therefore he submits that this application is now in condition for allowance, which action he respectfully solicits.

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Conditional Request For Constructive Assistance

Applicant has amended the specification and claims of this application so that they are proper, definite, and define novel structure which is also unobvious. If, for any reason this application is not believed to be in full condition of allowance, Applicant respectfully request the constructive assistance and suggestions of the Examiner pursuant to M.P.E.P. § 2173.02 and § 707.07(j) in order that the undersigned can place this applicant in allowable condition as soon as possible and without the need for further proceedings.

Very respectfully,


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